

WHAT IS CLAIMED IS:

1. A speech information processing method of generating a speech segment dictionary for holding a plurality of speech segments, comprising:

a selection step of selecting an encoding method of encoding a speech segment from a plurality of encoding methods;

a encoding step of encoding the speech segment by using the selected encoding method; and

a storage step of storing the encoded speech segment in a speech segment dictionary.

2. The method according to claim 1, wherein one of the plurality of encoding methods differs from other encoding methods in the number of quantization steps.

3. The method according to claim 1, wherein one of the plurality of encoding methods differs from other encoding methods in a quantization code book.

4. The method according to claim 1, wherein one of the plurality of encoding methods differs from other encoding methods in an encoding scheme.

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5. The method according to claim 1, wherein one of the plurality of encoding methods uses one of a μ -law scheme, scalar quantization, and linear predictive coding.

5 6. The method according to claim 1, wherein said selection step comprises performing control such that some speech segments are not encoded.

7. A speech information processing apparatus for
10 generating a speech segment dictionary for holding a plurality of speech segments, comprising:

selecting means for selecting an encoding method of encoding a speech segment from a plurality of encoding methods;

15 encoding means for encoding the speech segment by using the selected encoding method; and

storage means for storing the encoded speech segment in a speech segment dictionary.

20 8. The apparatus according to claim 7, wherein one of the plurality of encoding methods differs from other encoding methods in the number of quantization steps.

9. The apparatus according to claim 7, wherein one of the
25 plurality of encoding methods differs from other encoding methods in a quantization code book.

10. The apparatus according to claim 7, wherein one of the plurality of encoding methods differs from other encoding methods in an encoding scheme.

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11. The apparatus according to claim 7, wherein one of the plurality of encoding methods uses one of a μ -law scheme, scalar quantization, and linear predictive coding.

10 12. The apparatus according to claim 7, wherein said selecting means performs control such that some speech segments are not encoded.

15 13. A speech information processing method of synthesizing speech by using a speech segment dictionary for holding a plurality of speech segments, comprising:

a selection step of selecting, from a plurality of decoding methods, a decoding method of decoding a speech segment read out from the speech segment dictionary;

20 a decoding step of decoding the speech segment by using the selected decoding method; and

a speech synthesizing step of synthesizing speech on the basis of the decoded speech segment.

14. The method according to claim 13, wherein one of the plurality of decoding methods differs from other decoding methods in the number of quantization steps.

Sub 5 15. The method according to claim 13, wherein one of the plurality of decoding methods differs from other decoding methods in a quantization code book.

10 16. The method according to claim 13, wherein one of the plurality of decoding methods differs from other decoding methods in a decoding scheme.

15 17. The method according to claim 13, wherein one of the plurality of decoding methods uses one of a μ -law scheme, scalar quantization, and linear predictive coding.

18. The method according to claim 13, wherein said selection step comprises performing control such that some speech segments are not decoded.

20 19. A speech information processing apparatus for synthesizing speech by using a speech segment dictionary for holding a plurality of speech segments, comprising:

25 selecting means for selecting, from a plurality of decoding methods, a decoding method of decoding a speech segment read out from the speech segment dictionary;

decoding means for decoding the speech segment by using the selected decoding method; and

speech synthesizing means for synthesizing speech on the basis of the decoded speech segment.

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20. The apparatus according to claim 19, wherein one of the plurality of decoding methods differs from other decoding methods in the number of quantization steps.

10 21. The apparatus according to claim 19, wherein one of the plurality of decoding methods differs from other decoding methods in a quantization code book.

22. The apparatus according to claim 19, wherein one of
15 the plurality of decoding methods differs from other decoding methods in a decoding scheme.

23. The apparatus according to claim 19, wherein one of
the plurality of decoding methods uses one of a μ -law scheme,
20 scalar quantization, and linear predictive coding.

24. The apparatus according to claim 19, wherein said selecting means performs control such that some speech segments are not decoded.

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25. A speech information processing method of generating a speech segment dictionary for holding a plurality of speech segments, comprising:

a setting step of setting an encoding method of
5 encoding a speech segment in accordance with the type of the speech segment;

a encoding step of encoding the speech segment by using the set encoding method; and

a storage step of storing the encoded speech segment
10 in a speech segment dictionary.

26. The method according to claim 25, wherein said setting step comprises changing an encoding method to be set for the speech segment in accordance with whether the type of the
15 speech segment is a plosive or not.

27. The method according to claim 25, wherein said setting step comprises performing setting such that the speech segment is not encoded if the type of the speech segment is
20 a plosive.

28. The method according to claim 25, wherein said setting step comprises changing an encoding method to be set for the speech segment in accordance with whether the type of the
25 speech segment is an unvoiced sound or not.

29. The method according to claim 25, wherein said setting step comprises changing an encoding method to be set for the speech segment in accordance with whether the type of the speech segment is a nasal sound or not.

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30. A speech information processing apparatus for generating a speech segment dictionary for holding a plurality of speech segments, comprising:

setting means for setting an encoding method of
10 encoding a speech segment in accordance with the type of the speech segment;

encoding means for encoding the speech segment by using the set encoding method; and

storage means for storing the encoded speech segment
15 in a speech segment dictionary.

31. The apparatus according to claim 30, wherein said setting means changes an encoding method to be set for the speech segment in accordance with whether the type of the
20 speech segment is a plosive or not.

32. The apparatus according to claim 30, wherein said setting means performs setting such that the speech segment is not encoded if the type of the speech segment is a plosive.

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33. The apparatus according to claim 30, wherein said setting means changes an encoding method to be set for the speech segment in accordance with whether the type of the speech segment is an unvoiced sound or not.

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34. The apparatus according to claim 30, wherein said setting means changes an encoding method to be set for the speech segment in accordance with whether the type of the speech segment is a nasal sound or not.

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35. A speech information processing method of synthesizing speech by using a speech segment dictionary for holding a plurality of speech segments, comprising:

15 a setting step of setting a decoding method of decoding a speech segment read out from the speech segment dictionary in accordance with the type of the speech segment;

a decoding step of decoding the speech segment by using the set decoding method; and

20 a speech synthesizing step of synthesizing speech on the basis of the decoded speech segment.

36. The method according to claim 35, wherein said setting step comprises changing a decoding method to be set for the speech segment in accordance with whether the type of the speech segment is a plosive or not.

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37. The method according to claim 35, wherein said setting step comprises performing setting such that the speech segment is not decoded if the type of the speech segment is a plosive.

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38. The method according to claim 35, wherein said setting step comprises changing a decoding method to be set for the speech segment in accordance with whether the type of the speech segment is an unvoiced sound or not.

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39. The method according to claim 35, wherein said setting step comprises changing a decoding method to be set for the speech segment in accordance with whether the type of the speech segment is a nasal sound or not.

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40. A speech information processing apparatus for synthesizing speech by using a speech segment dictionary for holding a plurality of speech segments, comprising:

20 setting means for setting a decoding method of decoding a speech segment read out from the speech segment dictionary in accordance with the type of the speech segment;

decoding means for decoding the speech segment by using the set decoding method; and

25 speech synthesizing means for synthesizing speech on the basis of the decoded speech segment.

41. The apparatus according to claim 40, wherein said setting means changes a decoding method to be set for the speech segment in accordance with whether the type of the speech segment is a plosive or not.

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42. The apparatus according to claim 40, wherein said setting means performs setting such that the speech segment is not decoded if the type of the speech segment is a plosive.

10 43. The apparatus according to claim 40, wherein said setting means changes a decoding method to be set for the speech segment in accordance with whether the type of the speech segment is an unvoiced sound or not.

15 44. The apparatus according to claim 40, wherein said setting means changes a decoding method to be set for the speech segment in accordance with whether the type of the speech segment is a nasal sound or not.

20 45. A storage medium storing a control program for allowing
a computer to realize the speech information processing
method according to claim 1.

46. A storage medium storing a control program for allowing
25 a computer to realize the speech information processing
method according to claim 13.

47. A storage medium storing a control program for allowing a computer to realize the speech information processing method according to claim 25.

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48. A storage medium storing a control program for allowing a computer to realize the speech information processing method according to claim 35.

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